



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/510,019

05/31/2005

David Din Belle

06267.0124

8626

22852

7590

06/18/2008

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP

901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

AULAKH, CHARANJIT

ART UNIT

PAPER NUMBER

1625

MAIL DATE

DELIVERY MODE

06/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,019	Applicant(s) DIN BELLE ET AL.	
	Examiner Charanjit S. Aulakh	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 and 36-39 is/are pending in the application.
- 4a) Of the above claim(s) 2,7,8,16,23-32 and 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9-15,17-19,22 and 33 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/1/04, 1/4/06, 12/11/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election of group V in paper filed on May 14, 2008 is acknowledged.

Because applicant did not specifically and distinctly point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse; see MPEP 818.03(a).

2. Claims 1-33 and 36-39 are pending in the application. Claims 2, 7, 8, 16, 23-32 and 36-39 are withdrawn from further consideration as being directed to non-elected inventions.

Specification

3. The disclosure is objected to because of the following informalities:

Some parts of pages 14, 15, 17, 18, 20-22 and 51-54 are illegible. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 3-6 and 9-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The following eight different factors (see Ex parte Foreman, 230 USPQ at

547; Wands, In re, 858.F. 2d 731, 8 USPQ 2d 1400, Fed. Cir. 1988) must be considered in order for the specification to be enabling for what is being claimed:

Quantity of experimentation necessary, the amount of direction or guidance provided, presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability and the breadth of claims. In the instant case, the specification is not enabling based on at least four of the above mentioned eight different factors such as quantity of experimentation necessary, the amount of direction or guidance provided, presence of working examples, state of the prior art, unpredictability and the breadth of claims.

The instant specification teaches that the instant compounds are antagonists of alpha-2C receptors (see pages 54-58). Based on these data, the instant compounds will have therapeutic utility in treating only those disease conditions where alpha-2C receptor antagonists were well known to have therapeutic utility in the prior art before the effective filing date of the instant application. The instant specification teaches on page 1 that there are at least four different subtypes of alpha-2 –adrenergic receptors such as alpha-2A, alpha-2B, alpha-2C and alpha-2-D. There is no teaching or guidance present in the specification or prior art references provided to show well established utility of alpha-2C receptor antagonists in specific disease conditions. There is no teaching or guidance present in the specification how the instant compounds having selective antagonist activity at alpha-2-C receptors will have therapeutic utility in treating every known disease condition mediated by hyperactivity of alpha-2A, alpha 2-B or alpha-2D receptors. There are no working examples present showing efficacy of instant

Art Unit: 1625

compounds in known animal models of every known disorder mediated by hyperactivity of alpha-2A, alpha-2B, alpha-2C and alpha-2D receptors in the art. The instant compounds of formula I encompasses hundreds of thousands of compounds based on the values of variables R1, R3-R8, R15, R16, m and X and therefore, in absence of such teachings, guidance and presence of working examples, it would require undue experimentation to demonstrate the efficacy of instant compounds in known animal models of every known disorder mediated by hyperactivity of alpha-2A, alpha-2B, alpha-2C and alpha-2D receptors in the art and hence their utility for treating these disorders.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 3-6, 9, 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 3-6, 9, 10 and 13, the specific disease conditions mediated by hyperactivity of specific alpha-2 receptor antagonists are not defined.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 15, 18, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Galvez (J. heterocyclic. Chem., cited on applicant's form 1449).

Galvez discloses synthesis of some polycyclic systems related to benzoheteroquinolizidines. The compounds 1b, 1c and 1d (see scheme 1 on page

Art Unit: 1625

1355) by Galvez anticipate the instant claims when X represents S and R3 represents H, –CO-alkyl or –COO-alkyl in the instant compounds of formula IA.

9. Claims 1, 9-15, 17-19, 22 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Huff (U.S. Patent 4,686,226, cited on applicant's form 1449).

Huff discloses substituted benzo[B]furo- and benzo[B]thieno quinolizines as selective alpha-2-adrenergic receptor antagonists for treating various disease conditions. The compounds and methods of treating depression using these compounds disclosed in claims 1-12 by Huff anticipate the instant claims when variable R5 represents either carboxyl group or C1-C6 alkyl-COO-C1-C6 alkyl group in the instant compounds.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galvez (J. heterocyclic. Chem., cited on applicant's form 1449).

Art Unit: 1625

Galvez discloses synthesis of some polycyclic systems related to benzoheteroquinolizidines. The compounds 1b, 1c and 1d (see scheme 1 on page 1355) by Galvez meet all the limitations of the instant claims when R3 represents H, –CO-alkyl or –COO-alkyl in the instant compounds of formula IA except that variable X represents S instead of an O. However, both S and O belong to same class of chalcogens in the periodic table. Therefore, it would have been obvious to one skilled in the art to prepare the instant compounds by replacing chalcogen S with chalcogen O with reasonable expectation of success.

13. Claims 1, 3-6, 9-15, 17-22 and 33 are objected for containing non-elected subject matter.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charanjit S. Aulakh whose telephone number is (571)272-0678. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on (571)272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charanjit S. Aulakh/
Primary Examiner, Art Unit 1625